

CLAIMS

1. A method of producing a sensitizer dispersion, which comprises emulsifying and finely dividing a heat-sensitive recording sensitizer by melting under heating in an aqueous emulsifying dispersant, and then 5 crystallizing the finely divided emulsified dispersion under rapid cooling, wherein the sensitizer is at least one member selected from the group consisting of 1,2-bis(phenoxy)ethane, 1,2-bis(3-methylphenoxy)ethane, 1,2-bis(4-methylphenoxy)ethane, p-benzylbiphenyl, di-p-methylbenzyl oxalate, and β -naphthyl benzyl ether.
- 10 2. The method of producing a sensitizer dispersion according to claim 1, wherein the emulsified sensitizer dispersion is crystallized under rapid cooling, and the temperature after the rapid cooling is 50°C or less.
- 15 3. The method of producing a sensitizer dispersion according to claim 1 or 2, wherein the sensitizer is emulsified and finely divided such that the solids content of a mixture of the sensitizer and the emulsifying dispersant becomes 10 to 65 wt%, and the average particle diameter thereof becomes 3 μm or less.
- 20 4. A sensitizer dispersion obtained by the method described in any one of claims 1 to 3.
5. A method of producing a mixed dispersion for a heat-sensitive recording material, which comprises wet-grinding the sensitizer dispersion of claim 4 and a dye for a heat-sensitive recording material or a developer for a heat-sensitive recording material.
- 25 6. A mixed dispersion of a sensitizer dispersion and a dye for heat-sensitive recording material and a mixed dispersion of the sensitizer dispersion and a developer for a heat-sensitive recording material, which are obtained by the method described in claim 5.

7. A heat-sensitive recording material comprising a heat-sensitive recording layer containing the sensitizer dispersion of claim 4 or the mixed dispersion for a heat-sensitive recording material of claim 6 formed on the surface of a support.

- 5 8. The heat-sensitive recording material according to claim 7,
wherein the dye is at least one member selected from the group consisting
of 3-N,N-dibutylamino-6-methyl-7-anilinofluoran,
3-N,N-diethylamino-6-methyl-7-anilinofluoran,
3-N,N-diamylamino-6-methyl-7-anilinofluoran,
10 3-N,N-diethylamino-7-(m-trifluoromethylanilino) fluoran,
3-(N-isoamyl-N-ethyl) amino-6-methyl-7-anilinofluoran,
3-(N-p-tolyl-N-ethyl) amino-6-methyl-7-anilinofluoran,
3-(N-isopentyl-N-ethyl) amino-6-methyl-7-anilinofluoran,
3-(N-cyclohexyl-N-methyl) amino-6-methyl-7-anilinofluoran,
15 3-N,N-diethylamino-6-chloro-7-anilinofluoran and
3,3-bis(4-dimethylaminophenyl)-6-dimethylaminophthalide.

9. The heat-sensitive recording material according to claim 7 or 8,
wherein the developer is at least one member selected from the group
consisting of 4,4'-dihydroxy diphenyl sulfone, 2,4'-dihydroxy diphenyl
20 sulfone, 4-hydroxy-4'-isopropoxy diphenyl sulfone,
bis(3-allyl-4-hydroxyphenyl) sulfone, 2,2-bis(4-hydroxyphenyl) propane,
bis(4-hydroxyphenylthioethoxy) methane, bis(4-hydroxyphenylthioethyl)
ether, 4,4'-cyclohexylidene diphenol, 4-benzyloxy-4'-hydroxy diphenyl
sulfone, 4-allyloxy-4'-hydroxy diphenyl sulfone, benzyl p-hydroxybenzoate,
25 3,5-di(α -methylbenzyl) salicylic acid and its zinc salt,
2,4-bis(phenylsulfonyl) phenol, 2,4-bis(phenylsulfonyl)-5-methyl phenol,
4-hydroxy benzene sulfoanilide, a reaction mixture of toluene diisocyanate,

diaminodiphenyl sulfone and phenol,
4,4'-bis(p-toluenesulfonylaminocarbonylamino)-diphenyl methane,
p-toluene sulfonyl aminocarboanilide, α,α' -bis{4-(p-hydroxyphenylsulfone)
phenoxy}-p-xylene, a dehydration condensate of a
5 2,2-bis(hydroxymethyl-1,3-propane diol polycondensate and
4-hydroxybenzoic acid, and 4,4'-{oxybis(ethyleneoxy-p-phenylene sulfonyl)}
diphenol.